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AUTHOR Mikkelsen, Vincent P.
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ABSTRACT

A study evaluated the effects that a modified neurological impress method (a process whereby a student and a teacher read simultaneously) had on developing a student's decoding skills. Forty-two students in grades one through eight were randomly assigned to one of four groups: (1) a control group; (2) a group in which students read simultaneously with a tape recorder for 15 minutes a day, four days a week for three weeks using teacher assigned materials at the student's frustration reading level; (3) a group in which students read simultaneously with the tape recorder for the same amount of time, but using materials at each pupil's independent reading level; and (4) a group in which students read materials with a teacher in a traditional neurological impress method setting. Each student was pretested and posttested with an oral reading measure. The results indicated that tape recorded sessions using teacher assigned materials written for the pupil's frustration level produced significant growth in decoding skills. (FL)

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The Effects of a Modified Neurological Impress Method on
Developing Decoding Skills

Vincent P. Mikkelsen

East Carolina University

Department of Elementary Education

Greenville, North Carolina 27834

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The study evaluated the effects a modified neurological impress method (a process whereby a pupil and a teacher read simultaneously) had on developing a pupil's decoding skills. The study investigated whether a tape recorder could be used as an alternative to a teacher, whether instructional materials should be written for the pupil's frustrational or independent reading level and whether teacher assigned or pupil selected materials influenced growth. Forty-two students, grades 1-8, enrolled in a university summer reading program, were the subjects. The results indicate that tape recorded sessions using teacher assigned materials written for the pupil's frustrational level produced significant growth ($p < .02$).

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TITLE: THE EFFECTS OF A MODIFIED NEUROLOGICAL IMPRESS METHOD ON
DEVELOPING DECODING SKILLS

OBJECTIVES:

This study sought to evaluate the effects that a modified neurological impress method, (a process whereby a pupil and a teacher read aloud simultaneously) would have on developing a pupil's decoding skills. The study investigated the efficacy of using tape recorded reading selections as an alternative to live presentations by an instructor. The study also evaluated the use of instructional materials at the pupil's frustrational or independent reading level and determined whether teacher or pupil selected materials would be more effective.

PERSPECTIVE:

Heckelman (1966), Hollingsworth (1970, 1978) and others have enthusiastically recommended the impress method as an effective approach for assisting pupils, especially underachievers, to develop further their decoding skills. The success of the method has been demonstrated on numerous occasions but the method is very time-consuming, especially if many pupils need this approach. Even if the teacher did have enough time, the discomfort and fatigue associated with using one's voice frequently would be another limiting factor. If a tape recorder, however, could be used as a substitute for the teacher, without diminishing the effectiveness of the method, many more teachers would be encouraged to use the approach. An additional area of concern relates to what levels of materials should be used with the method and how they should be selected. Proponents of the

approach provide the practitioner with a variety of recommendations. Cunningham (1979) recommends materials written at the pupils independent reading level, whereas others (Hollingsworth) suggest the use of materials at the pupil's frustrational level. Additional specialists further confused the issue by recommending the use of materials that are pupil selected rather than teacher assigned.

METHOD AND TECHNIQUE:

During the summer of 1979, 42 pupils, grades 1-8, enrolled in the East Carolina University remedial reading program were chosen randomly and assigned randomly to one of four groups: a control group or one of three experimental groups. All of the groups received the tutorial training for three weeks. In addition to the tutorial training, one of the experimental groups read simultaneously with a tape recorder for 15 minutes a day, four days a week for three weeks, a total of three hours of taped instruction using teacher assigned materials at the pupil's frustrational reading level. A second experimental group read simultaneously with the tape recorder for the same duration of time, but in this group the teacher used student selected materials at the pupil's independent reading level. The third experimental group read materials with a teacher in a traditional neurological impress method setting for the same duration of time. Each of the teachers using the traditional NIM were instructed in how to use the technique as recommended by Heckleman.

DATA SOURCE:

Each of the 42 pupils was pre and post-tested with the Oral Reading

selection of the Gates-McKillop Diagnostic Test, alternate forms. Gain scores were then analyzed, using the Kruskal-Wallace One Way Analysis of Variance procedure, to determine differences among the groups. The Mann-Whitney U Test was then used to determine differences between groups.

RESULTS AND CONCLUSIONS:

Of the four groups involved in this study, the group of students who used tape recorded, teacher assigned materials at the pupils frustrational level performed significantly better than any of the other groups. These students made an average gain of three months growth, whereas the other experimental groups made little if any gains and the control group actually regressed. These results indicate that teachers can utilize the tape recorder as an alternative to the traditional impress method procedure and still expect the procedure to contribute to the pupil's attainment of decoding skills. However, it is important that the teacher assist the pupil in the selection of materials to be used in the interactive process. The materials offer a challenge to the pupil and if the materials are too easy, the effectiveness of the procedure will be seriously diminished. The results also indicate that the personal contact between the pupil and the teacher is not of crucial importance. In this study the teachers who read simultaneously with the pupils did not obtain significantly greater gains than the control group. This finding can be partially explained by examining the behavior of the teachers. In many cases, the pupils tended to modify the teachers oral reading performance rather than the teacher modifying the pupil's oral reading behavior.

EDUCATIONAL IMPLICATIONS:

The use of a modified neurological impress method which uses a tape recorder as the stimulus can assist the classroom teacher to develop more effectively and efficiently the decoding skills of pupils. However, when the teacher selects materials she should take into account the pupil's reading level. Also, the choice of materials should not be left up to the pupil entirely. The teacher should act in a supportive, facilitative manner. Even though the approach seems very simple, if the teacher wants to use the impress method in its original format, she must be thoroughly educated in its use, a brief introduction to the method is not enough.

Table 1 Months of Growth in Decoding Ability Among Experimental and Control Groups

	Control	Tape Recorded Materials		Teacher/Pupil Read Materials
		Teacher Assigned	Student Selected	
Growth in Decoding (months)	1 @ 7	1 @ 11	1 @ 7	1 @ 11
	1 @ 5	1 @ 9	1 @ 3	2 @ 2
	1 @ 3	1 @ 6	1 @ 0	1 @ 1
	4 @ 0	1 @ 5	1 @ -1	1 @ -1
	1 @ -1	4 @ 4	1 @ -3	1 @ -4
	2 @ -3	2 @ 3	1 @ -4	1 @ -6
	3 @ -4	1 @ 1	1 @ -6	
	1 @ -7	1 @ 0		
		1 @ -1		
		1 @ -2		
No. Cases	14	14	7	7
Total growth in months	(-11)	+51	(-4)	+5

Table 2 Comparison Among Groups and Growth in Decoding Ability

	Control	Tape Recorded Materials		Teacher/Pupil Read Material
		Teacher Assigned	Student Selected	
No. Cases	14	14	7	7
Rank	234	410.5	119.5	139
H= 7.82				

Kruskal-Wallis $H = 8.11$, $df = 3$, $p < .05$

Table 3 Comparisons Between Control and Experimental Groups and Growth in Decoding Ability

Comparisons			
Groups	No. Cases	Rank	U
Control vs	14	144	39**
Teacher assigned materials	14	262	
Control vs	14	154	49
Student selected materials	7	77	
Teacher assigned vs	14	182	21*
Student selected materials	7	49	
Teacher/Pupil vs	7	49.5	27.5
Taped, student selected	7	55.5	

Mann-Whitney U **39 < $p .02$.; *21 < $p .05$

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